AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** A catalyst system for the polymerization of α-olefins, the catalyst being prepared by a process including a catalyst activation comprising the contacting of a solid transition metal compound with an ~~organoaluminium~~organoaluminum compound, and a catalyst prepolymerization comprising the polymerization of a premonomer in the presence of the activated catalyst, ~~wherein~~ the catalyst activation ~~comprises~~ comprising a first step of contacting the solid transition metal compound with a first ~~organoaluminium~~organoaluminum compound in the presence of an oil to give a first reaction mixture wherein the weight ratio between said solid transition metal compound and said oil is between 0.1 and 5, and a second step of contacting the first reaction mixture with a second ~~organoaluminium~~organoaluminum compound to give a second reaction mixture, the second ~~organoaluminium~~organoaluminum compound being the same as or different from the first ~~organoaluminium~~organoaluminum compound.

2. **(Currently Amended)** The ~~-~~catalyst system according to claim 1, **wherein** ~~in that~~ in said first step, a mixture consisting essentially of said solid transition metal catalyst component and said oil is preactivated with said first ~~organoaluminium~~organoaluminum compound.

3. **(Cancelled).**

4. **(Previously Presented)** The catalyst system according to claim 2, wherein in said first step, said mixture consisting essentially of said solid transition metal compound and said oil has been prepared by heating them together at a temperature between about 26°C and about 100°C.

5. **(Previously Presented)** The catalyst system according to claim 1, wherein in said first step, said solid transition metal compound, said organoaluminum compound and said oil are precontacted at a temperature between -20°C and about +20°C.

6. **(Previously Presented)** The catalyst system according to claim 1, wherein in said first step, said organoaluminum compound (Al_1) and said solid transition metal (Tr) compound are contacted in the presence of said at least a part of the oil in an atomic ration Al_1/Tr of between 0.5 and about 5.

7. **(Previously Presented)** The catalyst system according to claim 1, wherein in said first step, said first reaction mixture is further contacted with a wax, fat or solid paraffin to give a waxed first reaction mixture.

8. **(Previously Presented)** The catalyst system according to claim 7, wherein in said first step, said wax, fat or solid paraffin is added at higher temperature than its melting point.

9. **(Previously Presented)** The catalyst system according to claim 1, wherein said first reaction mixture or said waxed first reaction mixture is further activated with said second organoaluminum compound in the second step.

10. **(Previously Presented)** The catalyst system according to claim 9, wherein in said second step, said first reaction mixture or said waxed first reaction mixture is contacted with an external electron donor.

11. **(Previously Presented)** The catalyst system according to any of claims 7 to 10, wherein the weight ratio between the total amount of said oil and the total amount of said wax, fat or solid paraffin is such that the viscosity of their mixture at 20-25 °C is about 1 Pa·s to about 15 Pa·s.

12. **(Previously Presented)** The catalyst system according to claim 1, wherein the atomic ratio between the aluminum (Al_1) of said first organoaluminum compound Al_1/Al_2 is between about 0.0001 and about 1.

13. **(Previously Presented)** The catalyst system according to claim 1, wherein the atomic ratio between the aluminum (Al) of the total amount of or organoaluminum compound and the transition metal (Tr) of the solid transition metal compound Al/Tr is between about 10 and 1000.

14. **(Previously Presented)** The catalyst system according to claim 1, wherein said solid transition metal compound has been prepared by contacting at least magnesium dichloride or a complex thereof, titanium tetrachloride and an internal electron donor.

15. **(Previously Presented)** The catalyst system according to claim 1, wherein said first organoaluminum compound has the formula (I):

$$R_{3m-n}Al_mX^n$$

Wherein R is a C_1-C_{12} alkyl, X is a halogen, m is 1 or 2 and $0 \leq n \leq (3m-1)$.

16. **(Previously Presented)** The catalyst system according to claim 1, wherein said second organoaluminum compound is the same as said first organoaluminum compound.

17. **(Previously Presented)** The catalyst system according to claim 1, wherein in the prepolymerization, the premonomer is polymerized in the presence of at least said second reaction mixture to give a prepolymerizate.

18. **(Previously Presented)** The catalyst system according to claim 1, wherein in the prepolymerization, the atomic ratio Al_{1+2}/Tr between, on one hand, the aluminum (Al_2) of said second organoaluminum compound and the aluminum (Al_1) if first organoaluminum compound taken together, and, on the other hand, the transition metal (Tr) if said transition metal compound, is from about 1 to about 10.

19. **(Previously Presented)** The catalyst system according to claim 1, wherein in prepolymerization, the amount of said olefin premonomer is such that the obtained weight ratio between the prepolymer obtained therefrom and said solid transition metal catalyst compound is between 1 and 10.

20. **(Previously Presented)** The catalyst system according to claim 1, wherein in the prepolymerization, said olefin premonomer is ethene.

21. **(Currently Amended)** ~~The~~ A process for the polymerization of an olefin, wherein an α-olefin is contacted with a catalyst ~~system~~ system prepared by a process including a catalyst activation step comprising the contacting of a solid transition metal compound with an organoaluminum compound, and a catalyst prepolymerization step comprising the polymerization of

a premonomer in the presence of the activated catalyst, the catalyst activation comprising a first step of contacting the solid transition metal compound with a first organoaluminum compound in the presence of an oil to give a first reaction mixture wherein the weight ratio between said solid transition metal compound and said oil is between 0.1 and 5, and a second step of contacting the first reaction mixture with a second organoaluminum compound to give a second reaction mixture, the second organoaluminum compound being the same as or different from the first organoaluminum compound~~according to claim 1~~.

22. **(Previously Presented)** The process according to claim 21, wherein said α-olefin is a C_3-C_6-α-olefin or a mixture thereof.

23. **(Previously Presented)** The process according to claim 21 or 22, wherein said α-olefin is copolymerized with another α-olefin monomer or ethene.

24. **(Previously Presented)** The process according to claim 21 or 22, wherein the olefin is contacted with a third organoaluminum compound.

25. **(Currently Amended)** The process according to claim 24, wherein the third ~~organoaluminium~~organoaluminum compound is the same as said first and/or second ~~organoaluminium~~organoaluminum compound.

26. **(Previously Presented)** The process according to claim 24, wherein the total amount of aluminum Al is such that the atomic ratio Al/Tr is 40-1000.

27. **(Previously Presented)** The process according to claim 21, wherein hydrogen is contacted with said catalyst system and said olefin under polymerization conditions, preferably in an amount giving propylene polymer having a melt flow rate MFR_2 of between 0.3 g/10 min and 2000 g/10 min.

28. **(Currently Amended)** The catalyst system according to claim 13, wherein the weight ratio between the solid transition metal compound and the oil is between 0.2 and 1.

29. **(Currently Amended)** The catalyst system according to claim 328, wherein the weight ratio is between 0.3 and 0.8.

30. **(Previously Presented)** The catalyst system according to claim 4, wherein the mixture has been prepared at a temperature of between about 30 °C and about 80 °C.

31. **(Previously Presented)** The catalyst system according to claim 5, wherein the precontacting step is carried out at a temperature of between 0 °C and about +16 °C.

32. **(Previously Presented)** The catalyst system according to claim 6, wherein the atomic ratio of Al_1/Tr is between about 1 and about 3.

33. **(Previously Presented)** The catalyst system according to claim 11, wherein the viscosity of the mixture is about 4 Pa·s to about 10 Pa·s.

34. **(Previously Presented)** The catalyst system according to claim 12, wherein the atomic ratio between the aluminum (Al_1) of said first organoaluminum compound Al_1/Al_2 is between about 0.01 and about 0.1.

35. **(Previously Presented)** The catalyst system according to claim 13, wherein the atomic ratio between the aluminum (Al) of the total amount of the organoaluminum compound and the transition metal (Tr) of the solid transition metal compound Al/Tr is between about 50 and 500.

36. **(Previously Presented)** The catalyst system according to claim 15, wherein the first organoaluminum compound according to formula (I) is a trialkyl aluminum.

37. **(Previously Presented)** The catalyst system according to claim 15, wherein the first organoaluminum compound according to formula (I) is triethyl aluminum TEA.

38. **(Previously Presented)** The catalyst system according to claim 18, wherein the atomic ratio Al_{1+2}/Tr is from about 3 to about 8.

39. **(Previously Presented)** The catalyst system according to claim 19, wherein the obtained weight ratio between the prepolymer obtained and the solid transition metal catalyst compound is between 1 and 5.

40. **(Currently Amended)** The ~~catalyst system~~ process according to claim 22, wherein the α-olefin is propene or a mixture of propene and less than 20% by weight of ethane.

41. **(Previously Presented)** The process according to claim 26, wherein the atomic ratio Al/Tr is about 50 to 500.

42. **(Previously Presented)** The process according to claim 27, wherein the melt flow rate MFR_2 is 0.3-1000 g/10 min.

43. **(Previously Presented)** The process according to claim 27, wherein the melt flow rate MFR_2 is between 1.0 g/10 min and 400 g/10 min.

44. **(New)** A process for the preparation of a catalyst system for the polymerization of α-olefins, the catalyst being prepared by a process including a catalyst activation comprising the contacting of a solid transition metal compound with an organoaluminum compound, and a catalyst prepolymerization comprising the polymerization of a premonomer in the presence of the activated catalyst, the catalyst activation comprising a first step of contacting the solid transition metal compound with a first organoaluminum compound in the presence of an oil to give a first reaction mixture, and a second step of contacting the first reaction mixture with a second organoaluminum compound to give a second reaction mixture, the second organoaluminum compound being the same as or different from the first organoaluminum compound.

45. **(New)** The process according to claim 43, wherein in said first step, a mixture consisting essentially of said solid transition metal catalyst component and said oil is preactivated with said first organoaluminum compound.

46. **(New)**. The process according to claim 44 or 45, wherein in said first step, the weight ratio between said solid transition metal compound and said oil is between 0.1 and 5

47. **(New)** The process according to claim 44, wherein in said first step, said organoaluminum compound (Al_1) and said solid transition metal (Tr) compound are contacted in the presence of said at least a part of the oil in an atomic ration Al_1/Tr of between 0.5 and about 5.

48. **(New)** The process according to claim 44, wherein in said first step, said first reaction mixture is further contacted with a wax, fat or solid paraffin to give a waxed first reaction mixture.

49. **(New)** The process according to claim 44, wherein said first reaction mixture or said waxed first reaction mixture is further activated with said second organoaluminum compound in the second step.

50. **(New)** The process according to claim 49, wherein in said second step, said first reaction mixture or said waxed first reaction mixture is contacted with an external electron donor.

51. **(New)** The process according to any of claims 48 to 50, wherein the weight ratio between the total amount of said oil and the total amount of said wax, fat or solid paraffin is such that the viscosity of their mixture at 20-25 °C is about 1 Pa·s to about 15 Pa·s.

52. **(New)** The process according to claim 44, wherein the atomic ratio between the aluminum (Al_1) of said first organoaluminum compound Al_1/Al_2 is between about 0.0001 and about 1.

53. **(New)** The process according to claim 44, wherein the atomic ratio between the aluminum (Al) of the total amount of or organoaluminum compound and the transition metal (Tr) of the solid transition metal compound Al/Tr is between about 10 and 1000.

54. **(New)** The process according to claim 44, wherein said first organoaluminum compound has the formula (I):

$$R_{3m-n}Al_mX^n$$

Wherein R is a C_1-C_{12} alkyl, X is a halogen, m is 1 or 2 and $0 \leq n \leq (3m-1)$.

55. **(New)** The process according to claim 44, wherein said second organoaluminum compound is the same as said first organoaluminum compound.

56. **(New)** The process according to claim 44, wherein in the prepolymerization, the premonomer is polymerized in the presence of at least said second reaction mixture to give a prepolymerizate.

57. **(New)** The process according to claim 44, wherein in the prepolymerization, the atomic ratio Al_{1+2}/Tr between, on one hand, the aluminum (Al_2) of said second organoaluminum compound

and the aluminum (Al_1) if first organoaluminum compound taken together, and, on the other hand, the transition metal (Tr) if said transition metal compound, is from about 1 to about 10.

58. **(New)** The process according to claim 44, wherein in prepolymerization, the amount of said olefin premonomer is such that the obtained weight ratio between the prepolymer obtained therefrom and said solid transition metal catalyst compound is between 1 and 10.

59. **(New)** The process according to claim 44, wherein in the prepolymerization, said olefin premonomer is ethene.